



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,441	09/18/2003	Earl O. Bergersen	BER-P-03-054	7298
29013	7590	12/21/2010	EXAMINER	
PATENTS+TMS, P.C.			LEWIS, RALPH A	
2849 W. ARMITAGE AVE.				
CHICAGO, IL 60647				
			ART UNIT	PAPER NUMBER
			3732	
			MAIL DATE	DELIVERY MODE
			12/21/2010	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

---

*Ex parte* EARL O. BERGERSEN

---

Appeal 2009-007487  
Application 10/665,441  
Technology Center 3700

---

Before WILLIAM F. PATE III, STEVEN D.A. McCARTHY and  
FRED A. SILVERBERG, *Administrative Patent Judges*.

McCARTHY, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

---

<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

STATEMENT OF THE CASE

The Appellant appeals under 35 U.S.C. § 134 from the decision of the Examiner finally rejecting claims 1-20 and 35-87. The Examiner rejects claims 1-6, 8-12, 14, 16, 17, 19, 20, 35-39, 41, 42, 44-51, 58-66 and 68-87 under 35 U.S.C. § 102(b) as being anticipated by Bergersen (5,645,420, issued Jul. 8, 1997); claims 7, 13, 43, 52-57 and 85-87 under 35 U.S.C. § 103(a) as being unpatentable over Bergersen; claims 15, 40 and 67 under § 103(a) as being unpatentable over Bergersen and Andrews (US 4,591,341, issued May 27, 1986); and claims 6, 42 and 66 under § 103(a) as being unpatentable over Bergersen and Watson (US 5,328,362, issued Jul. 12, 1994). The Examiner has identified no ground of rejection for claim 18. The Examiner has withdrawn claims 21-34 from consideration. We have jurisdiction under 35 U.S.C. § 6(b).

We sustain the rejections of claims 8-13, 63-67 and 74-84. We do not sustain the rejections of claims 1-7, 14-20, 35-62, 68-73 and 85-87.

Claim 8 is illustrative of the claimed subject matter:

8. A method for correcting a dentition in a mouth of a user having one or more types of teeth wherein one of the types of teeth is canine teeth, the method comprising the steps of:
  - providing a generally U-shaped base having a first socket that receives the canine teeth;
  - contacting the canine teeth with the generally U-shaped base
  - wherein the generally U-shaped base contacts the canine teeth on an outer side of the canine teeth and on an inner side of the canine teeth
  - wherein the inner side of the canine teeth is opposite in position to the outer side

wherein the socket has an occlusal surface;  
forming wedges within the first socket wherein each of the wedges extend outward with respect to the occlusal surface of the first socket to form an apex shaped to extend toward a canine tooth that is one of the canine teeth and to contact the canine tooth  
wherein the wedges contact an interproximal area of the canine tooth wherein the interproximal area is located between the canine tooth and a second tooth and  
further wherein the wedge does not contact any area of the canine tooth other than the interproximal area; and  
moving the canine tooth with the wedge when the base is worn by the user.

## OPINION

## Rejections Sustained

*The Rejections of Claims 8-13, 63-66 and 74-84 under § 102(b) as being anticipated by Bergersen; the Rejections of Claims 52-57 under § 103(a) as being unpatentable over Bergersen; the Rejection of Claim 67 under § 103(a) as being unpatentable over Bergersen and Andrews; and the Rejections of Claim 66 under § 103(a) as being unpatentable over Bergersen and Watson*

## ISSUES

The Appellant separately argues only the independent claims. The identification of issues in this appeal is made more difficult by the Appellant's choice to present the arguments addressed to specific claims by quoting claim language without further explanation. (*See* App. Br. 19-22). The quotation of claim language, and, in particular, the quotation of the

entire body of a claim, without further explanation provides no guidance as to how the Examiner might have erred in rejecting the claim. *Cf.* 37 C.F.R. § 41.37(c)(1)(vii) (“A statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim.”).

Only issues and findings of fact contested by the Appellant have been considered. *See Ex Parte Frye*, 94 USPQ2d 1072, 1075-76 (BPAI 2010). In view of the Examiner’s findings and conclusions, and the Appellant’s arguments, this appeal raises the following issues:

Does Bergersen disclose a dental appliance wherein a first portion of the dental appliance constructed from a first material contacts a different set of teeth than does a second portion of the dental appliance constructed from a second material harder than the first material? (*See App. Br. 18; Reply Br. 4-5*).

Does Bergersen disclose forming a slot in a base and continuously increasing the width of the slot from a first portion sized to receive an incisor type of tooth to a fourth portion sized to receive a molar type of tooth? (*See App. Br. 18*).

Does Bergersen disclose wedges as recited in claims 8, 63 and 74? (*App. Br. 19*)

#### FINDINGS OF FACT

The record supports the following findings of fact (“FF”) by a preponderance of the evidence.

1           1.     Bergersen describes a “preformed appliance for straightening  
2     and guiding teeth and providing jaw shaping functions for the permanent  
3     dentition. (Bergersen, col. 3, l. 66 – col. 4, l. 1).

4           2.     Bergersen’s appliance includes a U-shaped base. The base  
5     includes an upper or superior tooth receiving trough 22 and a lower or  
6     inferior tooth receiving trough 24. (Bergersen, col. 4, ll. 15-19).

7           3.     Both the superior and inferior tooth receiving troughs 22, 24 are  
8     provided with a plurality of tooth receiving depressions or sockets 22a-22g.  
9     These sockets may be divided into first, second, third and fourth sections of  
10    different shape. The sockets of the first through fourth sections are sized to  
11    receive incisors, cuspids, bi-cuspids and molars, respectively. (Bergersen,  
12    col. 4, ll. 25-31).

13          4.     We adopt the Examiner’s finding that each of the troughs 22,  
14    24 are slots. (*See* Ans. 11). We also adopt the Examiner’s finding that the  
15    width of the trough or slot 22 “increases from the front (Figure 3, a cross  
16    section of Figure 2 on line III-III) to the rear (Figure 5).” (Ans. 4).

17          5.     We also adopt the Examiner’s finding that Bergersen discloses  
18    “that a harder or softer liner material may be added to the base at ‘selected  
19    tooth depressions’ (column 7, lines 61-62) in order to help reposition a  
20    particular tooth.” (Ans. 5).

21          6.     Bergersen discloses reshaping selected tooth depressions  
22    exactly to the outer contour of the respective teeth to firmly hold the selected  
23    teeth in precise position. Bergersen discloses accomplishing this reshaping  
24    by introducing into the selected depressions a soft moldable material which  
25    has the property of hardening at body temperature after a short period of  
26    time. The body or base with the moldable material introduced into the

1 selected depressions is placed into the patient's mouth. The moldable  
2 material hardens in the patient's mouth. Once the moldable material  
3 hardens, the material is trimmed at the margins of the tooth depressions.  
4 (Bergersen, col. 7, ll. 43-58). Bergersen describes the liner material formed  
5 from the moldable material as being "within selected tooth depressions."  
6 (Bergersen, col. 7, ll. 58-65).

7         7. Bergersen discloses that the base has wedge-shaped projections  
8 *100* provided between the canines and lateral incisors. (Bergersen, col. 9, ll.  
9 44-47). Bergersen reports that the wedge shaped projection *100* moves the  
10 canine tooth. That is, the projection *100* causes the canines to drift distally  
11 along a distal surface of the wedge. (Bergersen, col. 9, ll. 63-66).

#### 12 13 ANALYSIS

14         The Appellant contends that Bergersen fails to disclose a dental  
15 appliance wherein a first portion of the dental appliance constructed from a  
16 first material contacts a different set of teeth than does a second portion of  
17 the dental appliance constructed from a second material harder than the first  
18 material? (See App. Br. 18; Reply Br. 4-5). Bergersen discloses introducing  
19 a "soft moldable material" to selected tooth depressions of a dental appliance  
20 formed from a different material. (FF 5 and 6). The Appellant does not  
21 appear to contest that one of the two materials will be harder than the other.  
22 (See App. Br. 18; Reply Br. 4-5).

23         Since the soft moldable material is introduced only into selected tooth  
24 depressions, the soft moldable material will not contact all of the teeth.  
25 Those teeth not contacted by the soft moldable material will be contacted by  
26 the material from which the appliance was originally made. Since the

1 material from which the appliance was originally made contacts some teeth  
2 which are not contacted by the soft moldable material, the material from  
3 which the appliance was originally made and the soft moldable material  
4 necessarily contact different sets of teeth. This is true even if the sets of  
5 teeth contacted by the two materials overlap. Neither claim 52 nor claim 79  
6 require a dental appliance in which the first and second materials contact  
7 different teeth.

8         The Appellant contends that Bergersen fails to disclose forming a slot  
9 in a base and continuously increasing the width of the slot from a first  
10 portion sized to receive an incisor type of tooth to a fourth portion sized to  
11 receive a molar type of tooth. The ordinary usage of the term slot is  
12 sufficiently broad to encompass “a hollow or depression,” “a long and  
13 narrow opening or groove” or “a narrow passage, enclosure or space.”  
14 (WEBSTER’S THIRD NEW INT’L DICTIONARY ( 1971)(“slot,” entry 2, defs. 1,  
15 2a and 2b). Any of these dictionary definitions fits Bergersen’s troughs 22,  
16 24.

17         The Appellants’ Specification neither expressly defines the term  
18 “slot” nor clearly disclaims an interpretation of that term sufficiently broad  
19 to encompass Bergersen’s troughs 22, 24. *See In re ICON Health & Fitness,*  
20 *Inc.*, 496 F.3d 1374, 1379 (Fed. Cir. 2007); *In re Morris*, 127 F.3d 1048,  
21 1054 (Fed. Cir. 1997)(in the absence of an express definition of a claim term  
22 in the specification or a clear disclaimer of scope, the claim term is  
23 interpreted as broadly as the ordinary usage of the term by one of ordinary  
24 skill in the art reasonably permits). Neither does the Appellant provide  
25 evidence or reasoning to suggest that the term “slot” has a specialized  
26 meaning in the pertinent art. Bergersen’s troughs 22, 24 are slots. (FF 4).



The Examiner finds that the width of the trough or slot 22 “increases from the front . . . to the rear (Figure 5).” (FF 4, citing Ans. 4). This finding is supported by the disclosure of Bergersen (FF4, comparing Bergersen, fig. 3 with *id.*, fig. 5) and is not persuasively contested by the Appellant. Bergersen’s slot or trough 22 continuously increases in width from a first portion sized to receive an incisor type of tooth to a fourth portion sized to receive a molar type of tooth. (FF 4).

The Appellant contends that Bergersen fails to disclose wedges as recited in claim 8. The Examiner finds that such wedges are disclosed by Bergersen in the paragraph beginning at column 9, line 63 and ending at column 10, line 3. (Ans. 11). The paragraph beginning at column 9, line 63 and ending at column 10, line 3 describes wedge shaped projections 100. (FF 7). The Appellant does not appear to contest the Examiner's finding that the wedge shaped projections 100 are wedges as recited in claims 8, 63 and 74.

## CONCLUSIONS

Bergersen discloses a dental appliance wherein a first portion of the dental appliance constructed from a first material contacts a different set of teeth than does a second portion of the dental appliance constructed from a second material harder than the first material.

Bergersen discloses forming a slot in a base and continuously increasing the width of the slot from a first portion sized to receive an incisor type of tooth to a fourth portion sized to receive a molar type of tooth.

1 Bergersen discloses wedges as recited in claims 8, 63 and 74.

2 We sustain the rejections of claims 8-13, 63-66 and 74-84 under  
3 § 102(b) as being anticipated by Bergersen. The Appellant does not contest  
4 the Examiner's reasoning in support of the conclusions that the subject  
5 matter of claims 52-57 would have been obvious from the teachings of  
6 Bergersen; that the subject matter of claim 67 would have been obvious  
7 from the teachings of Bergersen and Andrews; or that the subject matter of  
8 claim 66 would have been obvious from the teachings of Bergersen and  
9 Watson. We also sustain the rejections of claims 52-57 under § 103(a) as  
10 being unpatentable over Bergersen; the rejection of claim 67 under  
11 § 103(a) as being unpatentable over Bergersen and Andrews; and the  
12 rejections of claim 66 under § 103(a) as being unpatentable over  
13 Bergersen and Watson.

14

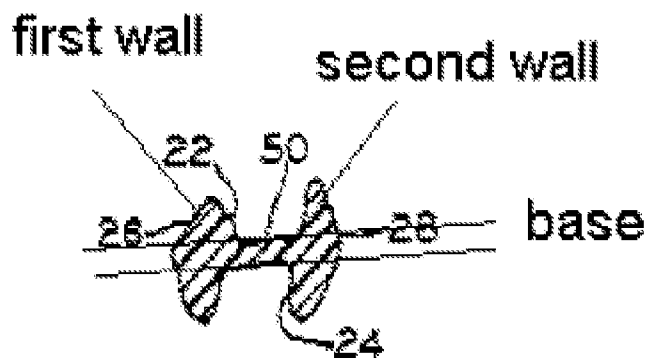
15 *Rejections Not Sustained*

16 *The Rejections of Claims 1-6, 14, 16, 17, 19, 20, 35-39, 41, 58-62 and 68-73*  
17 *under § 102(b) as being anticipated by Bergersen; the Rejections of Claims*  
18 *7 and 43 under § 103(a) as being unpatentable over Bergersen; the*  
19 *Rejection of Claim 40 under § 103(a) as being unpatentable over Bergersen*  
20 *and Andrews; and the Rejections of Claims 6 and 42 under § 103(a) as*  
21 *being unpatentable over Bergersen and Watson*

22 Claim 1 recites a dental appliance. The dental appliance includes "a  
23 wire embedded within the base . . . wherein the wire extends vertically from  
24 the base adjacent to the first side of the tooth and does not extend from the  
25 base adjacent to the second side of the tooth." The Examiner finds that:

26 In regard to the "wire embedded in the base"  
27 limitation of claim 1, Bergersen '420 discloses in  
28 Figures 13 and 14 a wire member 104 (note  
29 column 10, lines 4-10) which is embedded within

the base and extends from the base vertically (in a “serpentine shape”) into the outer wall (i.e. second wall 28) on one side of a tooth and not on the opposite side of the same tooth (i.e. in the first inner wall 26). For purposes of the present rejection the “base” is considered to be that portion between the two roughly horizontal lines in the reproduced Figure 5 below and the first and second walls are considered to extend upward from the base.



**FIG. 5**

(Ans. 4-5). Figure 5 is a sectional view of an orthodontic appliance including flanges 26, 28 connected by an isthmus 50 to define tooth receiving troughs 22, 24.

The Appellant correctly points out that the Examiner’s interpretation of the term “base” as used in claim 1 is unreasonable. (*See* Reply Br. 2-3). For example, claim 1 recites “a slot in the base wherein the slot is defined between the first wall and the second wall.” The slot defined between the first and second walls can be in the base only if the first and second walls are part of the base.

Bergersen describes the wire member 104 as being “molded into the interior of the appliance.” (Bergersen, col. 10, ll. 4-7). When the term “base” is properly interpreted as including the buccal flange 94 (*see*

1 Bergersen, figs. 13 and 14), the wire member *104* does not extend vertically  
2 *from* (that is, out of) the base. The Examiner identifies no other structure  
3 disclosed by Bergersen which might correspond to the wire recited in claim  
4 1.

5 Claim 14 recites a method for correcting a dentition. The method  
6 includes the step of “applying pressure to one side of the tooth with a wire  
7 embedded within the base wherein the wire extends vertically from the base  
8 and contacts the first tooth only on one side of the first tooth.” Claim 58  
9 recites a dental appliance. The dental appliance includes “a wire embedded  
10 within the base wherein the wire extends vertically from the exterior surface  
11 of the generally U-shaped base toward a tooth when the base is worn by a  
12 user.” Claim 68 recites a method for treating a malocclusion in a mouth of a  
13 user. The method includes the step of “contacting the canine type tooth with  
14 a wire embedded in the base wherein the wire extends from the base and  
15 contacts the canine type tooth only on one side of the canine type tooth.”

16 Interpreting the term “base” as used in claims 14, 58 and 68  
17 consistently with the usage of the term in claim 1, *see Rexnord Corp. v.*  
18 *Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001)(“[A] claim term  
19 should be construed consistently with its appearance . . . in other claims of  
20 the same patent.”), the wire member *104* does not extend vertically *from* the  
21 base. The Examiner identifies no other structure disclosed by Bergersen  
22 which might correspond to the wire recited in claim 14, claim 58 or claim  
23 68.

24 Claim 35 recites a dental appliance. The dental appliance includes “a  
25 wire embedded within the base wherein the wire extends vertically from a  
26 top surface of the second wall toward the teeth when the base is worn by the

1 user wherein the wire is shaped to contact a labial side of the first tooth.”  
2 The wire member 104 does not extend vertically *from* (that is, out of) either  
3 the buccal flange 94 or the opposite, lingual flange. The Examiner identifies  
4 no other structure disclosed by Bergersen which might correspond to the  
5 wire recited in claim 35.

6 Bergersen does not disclose each and every limitation of independent  
7 claims 1, 14, 35, 58 and 68. Since claims 2-6 depend from claim 1; claims  
8 16, 17, 19 and 20 depend from claim 14; claims 36-39, 41 and 42 depend  
9 from claim 35; claims 59-62 depend from claim 58; and claims 69-73  
10 depend from claim 68, we do not sustain the rejections of claims 1-6, 14, 16,  
11 17, 19, 20, 35-39, 41, 42, 58-62 and 68-73 under § 102(b) as being  
12 anticipated by Bergersen.

13 Claim 7 depends from claim 1. In rejecting claim 7 under § 103(a),  
14 the Examiner concludes that it would have been obvious “to have embedded  
15 the wire in the internal wall of the appliance in order to push the inner side  
16 of the patient’s teeth.” (Ans. 8). Bergersen fails to disclose any wire  
17 extending vertically from the base. The Examiner’s reasoning does not  
18 persuasively explain why one of ordinary skill in the art might have had  
19 reason to provide such a wire in the absence of evidence that the use of such  
20 a wire to apply pressure to a patient’s teeth was known. We do not sustain  
21 the rejection of claim 7 under § 103(a) as being unpatentable over  
22 Bergersen.

23 Claim 43 depends from claim 35. The Examiner concludes that it  
24 would have been obvious to provide an appliance with a vertical slit on the  
25 exterior surface as recited in claim 43. (See Ans. 8). The Examiner’s  
26 reasoning does not remedy the deficiencies in the disclosure of Bergersen

1 identified in connection with the rejections of claim 35. We do not sustain  
2 the rejections of claim 43 under § 103(a) as being unpatentable over  
3 Bergersen.

4 Claim 15 depends from claim 14. Claim 40 also depends from claim  
5 35. Andrews discloses an orthodontic positioner *10* with molded  
6 depressions *12a-12c*. Figure 3 of Andrews depicts strips of suction devices  
7 *14, 16* located to confront inner and outer surfaces of a row of teeth when  
8 the positioner is worn. (*See Andrews*, col. 2, ll. 59-67). The Examiner fails  
9 to explain persuasively how the teachings of Andrews remedy the  
10 deficiencies in the disclosure of Bergersen identified in connection with the  
11 rejections of claim 14 and 35. (*See Ans. 9*). We do not sustain the rejection  
12 of claims 15 and 40 under § 103(a) as being unpatentable over Bergersen  
13 and Andrews.

14 Claim 6 depends from claim 1. Claim 42 depends from claim 35.  
15 Watson discloses an interocclusal dental appliance including a relatively  
16 hard occlusal layer which is formed from a first material and joined to a  
17 jacketing section formed from a second material. (*Watson*, col. 3, ll. 45-48  
18 and col. 3, l. 60 – col. 4, l. 2). The Examiner fails to explain persuasively  
19 how the teachings of Watson remedy the deficiencies in the disclosure of  
20 Bergersen identified in connection with the rejections of claims 1 and 35.  
21 (*See Ans. 10*). We do not sustain the rejections of claims 6 and 42 under  
22 § 103(a) as being unpatentable over Bergersen and Watson.

*The Rejections of Claims 44-51 and 85-87 under § 102(b) as being anticipated by Bergersen; and the Rejections of Claims 85-87 under § 103(a) as being unpatentable over Bergersen*

Claims 44 and 85 recite dental appliances. The dental appliance of claim 44 includes “a wire embedded within the base wherein the wire is shaped to contact only a labial side of one of the teeth.” The dental appliance of claim 85 includes “a wire embedded in the base wherein the wire extends from the outer surface of one of the sockets wherein the wire contacts the first tooth and further wherein the wire extends from only one side of the socket.” The Examiner finds that the limitations requiring the wires to “contact” one of the teeth are met “by the wire 104 of Bergersen '420, which runs immediately adjacent the tooth sockets (Figure 13) and contacts at least a first tooth through an apparent thin layer of plastic.” (Ans. 10-11).

The ordinary usage of the term “contact” is limited to “union or junction of body surfaces: a touching or meeting.” (WEBSTER’S THIRD NEW INT’L DICTIONARY (1971)(“contact,” entry 1, def. 1a). The Examiner points to no broader usage in the Specification. Bergersen describes the wire member 104 as being “molded into the interior of the appliance.” (Bergersen, col. 10, ll. 4-7). The Examiner provides no sound basis for belief that Bergersen’s wire member 104 contacts any tooth in the sense of touching or meeting the tooth. Neither does the Examiner identify another structure disclosed by Bergersen which might correspond to the wire recited in claim 44 or claim 85.

Bergersen does not disclose each and every limitation of claims 44 and 85. Since claims 45-51 depend from claim 44 and claims 86 and 87 depend from claim 85, we do not sustain the rejections of claims 44-51 and

85-87 under § 102(b) as being anticipated by Bergersen. Although the Examiner has entered a hybrid 102(b)/103(a) rejection against claims 85-87 over Bergersen, the Examiner fails to explain how the subject matter of claims 85-87 might have been obvious if the claims are not anticipated by Bergersen. We do not sustain the rejections of claims 85-87 under § 103(a) as being unpatentable over Bergersen.

DECISION

We AFFIRM the Examiner's decision rejecting claims 8-13, 52-57, 63-67 and 74-84.

We REVERSE the Examiner's decision rejecting claims 1-7, 14-20, 35-51, 58-62, 68-73 and 85-87.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1).

AFFIRMED-IN-PART

Klh  
PATENTS+TMS, P.C.  
2849 ARMITAGE AVE.  
CHICAGO, IL 60647